

REMARKS/ARGUMENTS

Reconsideration of this application is requested. Claims 1, 3, 9, 14 and 15 are pending in the application of which claim 14 has been withdrawn from consideration as directed to non-elected subject matter.

Responsive to the examiner's comments in the Official Action, the specification has been amended to insert sectional titles, where appropriate and given the nature of the disclosure.

The claims have been substantially amended in order to reduce issues, address the comments contained on page 3 of the Official Action and to progress examination generally. The amendments to the claims are as follows. Claim 1 has been amended to incorporate claims 4 and 5. Claim 1 has also been reworded so as to address the first clarity issue raised by the Examiner under 35 USC §112. Gelatin is excluded from claim 1 based on page 9, lines 29-31.

Claims referring to a liquid component are deleted, i.e. claims 2 and 6-8. Claims 10 to 13 are also deleted. Claim 14 is already withdrawn. New claim 15 directed to algae micronised to 30 to 160 microns, based on page 5, line 12 has been added.

Responding to the clarity issues in more detail, the applicant submits that the teaching of the description (page 8, lines 31-33) and the examples (pages 11-12) clearly states that it is the composition of claim 1 which forms a gel when mixed with wet feed and/or water. Claim 1 has, however, been amended so as to remove any ambiguity on this point. The other objections are moot in view of the deletion of claim 2.

Responding to the prior art objections, the Examiner lists both Dugger et al (WO 98/47392) and Smith (GB 2175486) as novelty-destroying documents.

Dugger et al discloses gel feed products which comprise an edible gel carrier matrix in addition to nutrients, attractants, preservatives, immune system stimulants, appetite stimulants, color enhancers and therapeutic agents (page 4, lines 12-16). Nutrients may include proteins, carbohydrates and fats (page 4, lines 5-9).

The applicant submits that Dugger does not disclose a dry feed as required in claim 1 as above amended. Dugger discloses a gel feed and not a dry feed. Claim 1 of Dugger and the rest of its disclosure requires the presence of a gel matrix, i.e. a dry, non gel product is not envisaged. Claim 1 is therefore new.

Smith describes a feed for prawns in the form of a gel, which comprises a fine mash and a gelling agent, such as sodium alginate. Nowhere in Smith, is a composition disclosed which utilizes particulate natural algae as a natural binder as required in claim 1 and is a dry feed, not a gel. The current claim set is also novel over this document.

Discussing next the rejections under 35 USC §103(a), the Examiner has stated that claims 11-13 are obvious in light of Dugger et al. These claims have been canceled so the rejection is moot. However if the Examiner were to apply Dugger under Section 103 to any of the now pending claims applicant submits Dugger discloses a gel delivery system. The applicant accepts that gels are a known form of food delivery, however this invention relates to the supplying of a precursor to a gel. The inventor has devised a particulate material that, when combined with water or another fish feed, becomes a gel. This means the gel need only be formed just before the food is eaten. The actual dry feed product can be shipped and stored as a powder. This makes it cheap to transport and store (it is very light), and makes it less susceptible to degradation.

Moreover, the product gels at room temperature and does not use a gelling agent which requires heating. In particular, it does not utilize gelatin (in fact excluded from the claims) which requires high temperature to encourage dissolution in water. The dry feed of the present invention simply gels on contact with cold water.

Claim 1 is also amended to refer to "cold" gelling as included in the original description of the invention, for instance on page 4, lines 21-23 and the last two lines as well as other passages including claim 14 (now withdrawn). The point is that the products of the present invention gell at room temperature and do not require a gelling agent which requires heating. The term is supported in the description and its relationship to the invention will be apparent from even a cursory review of the description.

The key to cold gelling is the particulate natural algae component. As noted on page 5, line 12, this is preferably micronized to a size of between 30 to 160 microns. By using natural algae, in particular in this size range, gels are allowed to form. Especially the use of different particle sizes of micronized algae encourages gel formation on cold water addition.

One of the technical problems solved by the current invention is that it provides a cold setting instant gel whose formation does not require the use of heat. Crucially, this means that

gels of the current application can be pressed in to the desired shape as opposed to gels of the type of Dugger which require to be set into a particular shape. This new and unexpected technical feature is obtained by using natural algae as the binder as opposed to conventional gelling agents such as gelatin.

Hot gelling, as is used in Dugger, denatures nutrients and other medical components in the gel. The present invention avoids any such problems by allowing cold gelling.

Cold gelling is very useful in this field where fish feeds are often frozen prior to being given to an organism. To be able to form a gel with such a cold feed is hugely valuable.

The current claim set is therefore not obvious over Dugger et al who does not teach a dry feed or a cold gelling feed. The example in Dugger actually uses hot gelatin, the exact problem which this invention solves. Claim 1 now excludes gelatin of course.

Dugger does not envisage the use of algae as low temperature gelling agents. While kelp meal is a component on the Example in Dugger, there is already a gelling agent present (gelatin) so kelp is not used for this purpose. Moreover, it is questionable whether there is sufficient kelp meal to cause any gelation. There is certainly no teaching that by removing gelatin, one could provide a dry feed that gels in cold water.

Smith does not teach the use of a dry feed or natural algae. Sodium alginate is not a natural algae component, it is a synthetic compound. To manufacture sodium alginate, the alginic acid needs to be extracted from seaweed and purified and formed into the sodium salt. There is no teaching in Smith that natural algae, especially in micronized form, could act to cause gelling with cold water. In a natural product, the amount of alginate, if present, is likely to be low. The amount of alginate actually in the overall composition of the invention is therefore very much lower than the limits in claim 1 of Smith. The fact that the whole algae can be used to cause low temperature gelling is therefore remarkable. Using the natural algae also means that any nutrients in the algae are themselves present in the composition.

Smith does not therefore teach the present invention.

Conclusion

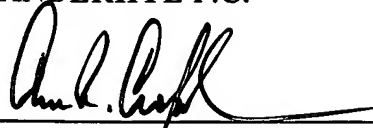
For the above reasons it is respectfully submitted that claims 1, 3, 9, and 15 define novel and inventive subject matter in a clear and concise manner. Reconsideration and allowance are solicited. Should the examiner require further information, please contact the undersigned.

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Respectfully submitted,

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